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TITLE: Ion-conductive composition, gel electrolyte, non-aqueous electrolyte battery, and electrical double-layer capacitor

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INVENTOR-INFORMATION:

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REFERENCE-FIGURES: 2

ABSTRACT:

An ion-conductive composition includes an electrolyte solution made of an ion-conductive salt and a solvent in which the ion-conductive salt is soluble, and a thermoplastic resin having a specific swelling ratio when immersed in the electrolyte solution. The invention is also directed at a gel electrolyte produced by shaping the thermoplastic resin, then immersing it in an electrolyte solution to effect swelling. High-performance non-aqueous electrolyte batteries and electrical double-layer capacitors can be built using a thermoplastic resin-containing electrode binder composition in which the resin bonds well with active materials or activated carbon and which has an excellent adhesion to current conductors.

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Detail Description Paragraph - DETX (98):

[0145] The conductive material may be any suitable material capable of conferring electrical conductivity to the polarizable electrode binder composition. Illustrative examples include carbon black, Ketjenblack, acetylene black, carbon whiskers, carbon fibers, natural graphite, artificial graphite, titanium oxide, ruthenium oxide, and metallic fibers such as aluminum or nickel. Any one or combinations of two or more thereof may be used. Of these, Ketjenblack and acetylene black, which are both types of carbon black, are preferred. The average particle size of the conductive material powder is preferably 10 to 100 nm, and especially 20 to 40 nm.